44. The method of claim 43, further comprising: isolating recombinant DNA from said nonadherent cells.

45. The method of claim 44, further comprising: transferring said recombinant DNA to a second population of adherent cells, contacting said second population with cytotoxic T cells specific for said target epitope, and collecting cells which become nonadherent.

46. The method of claim 43, wherein said test recombinants comprise non-viral DNA constructed in a viral vector.

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47. The method of claim 46, wherein said test recombinants comprise non-viral DNA constructed in a mammalian virus vector.

48. The method of claim 47, wherein said test recombinants comprise non-viral DNA constructed in a herpes virus vector.

49. The method of claim 46, wherein said test recombinants comprise non-viral DNA constructed in a poxvirus vector.

50. The method of claim 49, wherein said test recombinants comprise non-viral DNA constructed in a vaccinia virus vector.

51. The method of claim 46, wherein said test recombinants are capable of producing infectious viral particles.

52. The method of claim 50, wherein said non-viral DNA is operably linked to a strong constitutive promoter.

53. The method of claim 52, wherein said vaccinia virus vector comprises a sequence shown in SEQ ID NO:1 or SEQ ID NO:3.

54. The method of claim 52, wherein said non-viral DNA is operably linked to translation and transcription stop signals.

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55. The method of claim 54, wherein said vaccinia virus vector comprises the sequence shown in SEQ ID NO:6.

56. The method of claim 54, wherein said non-viral DNA is operably linked to a translation initiation site.

57. The method of claim 56, wherein said translation initiation site occurs in one of three reading frames.

58. The method of claim 57, wherein said vaccinia virus vector comprises a sequence shown in SEQ ID NO:7, SEQ ID NO:8 or SEQ ID NO:9.

59. The method of claim 43, wherein said test recombinants are constructed by modified homologous recombination.

60. The method of claim 43, wherein said test recombinants are constructed by trimolecular recombination.

61. The method of claim 43, wherein said test recombinants comprise a DNA library.

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62. The method of claim 43, wherein said target epitope is differentially expressed in infected cells.

63. The method of claim 62, wherein said target epitope is differentially expressed in cells infected with a virus.

64. The method of claim 62, wherein said target epitope is differentially expressed in cells infected with a fungus.

65. The method of claim 62, wherein said target epitope is differentially expressed in cells infected with mycobacteria.

66. The method of claim 43, wherein said target epitope is specific to an autoimmune disease.